

AD-A111 882

AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OH SCHOOL--ETC P/6 S/9  
EFFECT OF SUPERVISOR ACTUALLY WRITING PERFORMANCE REPORTS, SEX,--ETC(U)  
SEP 81 N K OVALLE, W M HENDRIX

UNCLASSIFIED

AFIT-LS-7-81

NL

for 1  
28 (10/81)

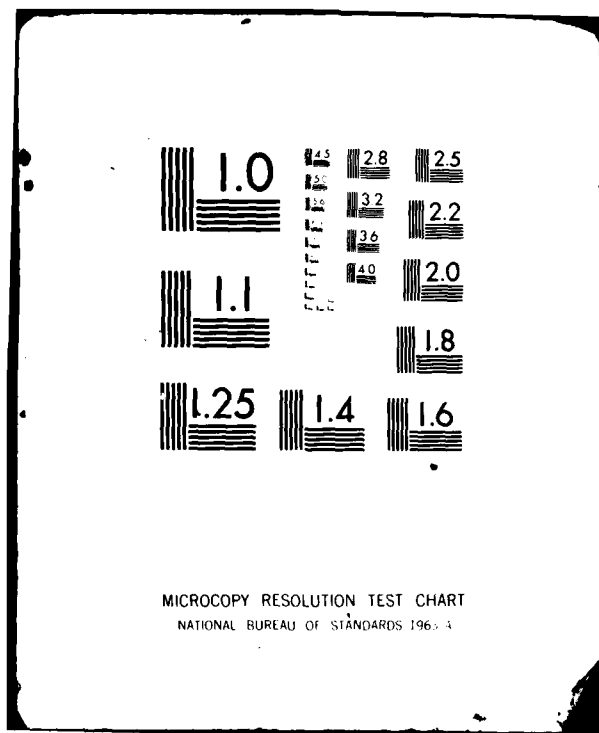
END

DATE

FILMED

8-82

DTIC

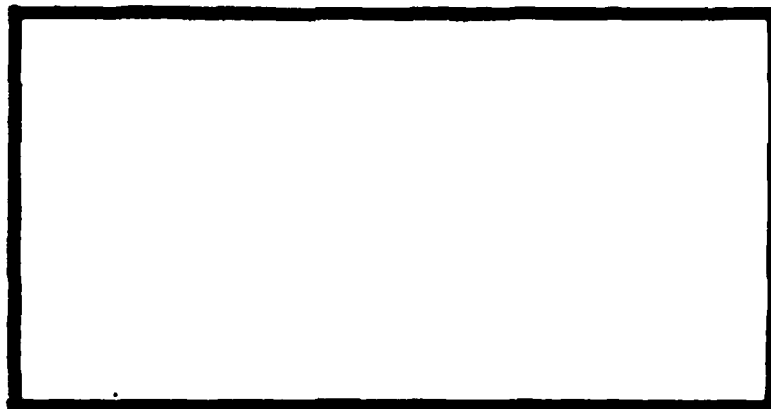


AD A111652



2

DTIC  
ELECTE  
MAR 4 1982  
H



DTIC FILE COPY

DEPARTMENT OF THE AIR FORCE  
AIR UNIVERSITY (ATC)  
**AIR FORCE INSTITUTE OF TECHNOLOGY**

Wright-Patterson Air Force Base, Ohio

**DISTRIBUTION STATEMENT A**  
Approved for public release;  
Distribution Unlimited

82 03 04 025

(2)

DISPATCHED  
20  
1981

EFFECT OF SUPERVISOR ACTUALLY WRITING  
PERFORMANCE REPORTS, SEX, AND  
COMMUNICATION BETWEEN WORKERS  
ON ORGANIZATIONAL EFFECTIVENESS

Nestor K. Ovalle, 2d, Major, USAF  
William H. Hendrix, Lieutenant Colonel, USAF

AU-AFIT-LS-7-81

DISTRIBUTION STATEMENT
Approved for Release
DATE 10-10-81

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AU-AFIT-LS-7-81	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) EFFECT OF SUPERVISOR ACTUALLY WRITING PERFORMANCE REPORTS, SEX, AND COMMUNICATION BETWEEN WORKERS ON ORGANIZATIONAL EFFECTIVENESS		5. TYPE OF REPORT & PERIOD COVERED AU-AFIT-LS Technical Report
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Nestor K. Ovalle, 2d, Major, USAF William H. Hendrix, Lieutenant Colonel, USAF		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS School of Systems and Logistics Air Force Institute of Technology, WPAFB OH		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Department of Communication and Humanities AFIT/LSH, WPAFB OH 45433		12. REPORT DATE September 1981
		13. NUMBER OF PAGES 13
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report)  UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES  25 JAN 1982 APPROVED FOR PUBLIC RELEASE AFR 190-17. FREDRIC C. LYNCH, Major, USAF Director of Public Affairs		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Organizational Effectiveness Interpersonal communication Supervisory performance evalaution		Air Force Institute of Technology (ATC) Wright Patterson AFB, OH 45433
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		

DD FORM 1473

JAN 73

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

Research was conducted to establish the effects of supervisor actually writing performance reports, sex of employee, and communication between workers on three criteria of organizational effectiveness (i.e., climate, satisfaction, and perceived productivity). Data were collected on 4786 military and civilian personnel located at five Air Force bases using the Organizational Assessment Package (OAP). A one-way ANOVA was used to test for significant differences associated with whether the supervisor actually writes the employee's performance reports. A two-way ANOVA was used to test for significant differences associated with the employee's sex and the amount of communication between workers. There were significant differences on all three criteria based upon whether or not the supervisor actually writes the performance reports. All three criteria were enhanced for those subjects whose supervisor actually wrote the reports. Additionally, the data revealed a consistent, positive relationship between the extent of communication among workers (for both male and female members) and all three effectiveness criteria.

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail
A	

DTIC  
COPY  
INSPECTED  
2

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

AU-AFIT-LS-7-81

EFFECT OF SUPERVISOR ACTUALLY WRITING PERFORMANCE  
REPORTS, SEX, AND COMMUNICATION BETWEEN  
WORKERS ON ORGANIZATIONAL EFFECTIVENESS

A School of Systems and Logistics AU-AFIT-LS Technical Report

Air University

Air Force Institute of Technology

Wright-Patterson AFB, Ohio

By

Nestor K. Ovalle, 2d  
Major, USAF

William H. Hendrix  
Lieutenant Colonel, USAF

September 1981

Approved for public release;  
distribution unlimited

EFFECT OF SUPERVISOR ACTUALLY WRITING PERFORMANCE REPORTS,  
SEX, AND COMMUNICATION BETWEEN WORKERS  
ON ORGANIZATIONAL EFFECTIVENESS

Nestor K. Ovalle, 2d

and

William H. Hendrix

Air Force Institute of Technology

Wright-Patterson AFB OH 45433

INTRODUCTION

There is a general agreement by both organization managers and organizational behavior researchers that improving organizational effectiveness is one of the more pervasive and complex issues in today's organizations (Goodman & Pennings, 1979; Steers, 1977). Many approaches have been employed to enhance effectiveness at all levels in the organization (i.e., the individual, work group, and organization-wide levels). Moreover, many of these approaches, specifically those which are based on the behavioral sciences, have focused on the management of the organization's most critical resource, the human resource. These include programs focusing on such areas as goal setting, group decision making, job design and planned organizational change. Additionally, we now recognize that the success of managers in creating effective organizations is, to a great extent, dependent on their ability to understand what makes organizations function as they do. This is a prerequisite to being able to decide on the application of one or more



behaviorally-based approaches to enhance effectiveness. In this vein, the US Air Force, like many organizations, has recognized and struggled with the need to identify organizational problem areas requiring management attention. One of the more systematic Air Force programs, designed to confront the issue of organizational effectiveness, is that used by the Leadership and Management Development Center (LMDC) at Maxwell AFB, Alabama. LMDC identifies organizational strengths and problem areas through the administration of the Organizational Assessment Package (OAP) (Hendrix & Halverson, 1979).

#### RESEARCH PROBLEM

During the process of validating the OAP, a large amount of data were collected by LMDC. In addition to validating the OAP, analysis of these data was needed to identify the factors related to organizational effectiveness in order to improve our understanding of what makes organizations function as they do. This paper focuses on research to establish the effect of the supervisor actually writing employees' performance reports, sex of employees, and communication between workers on three criteria of effectiveness.

#### METHOD

##### Subjects

Subjects consisted of 4786 military and civilian personnel located at five Air Force bases representing six major commands. The sample's composition was: 2% non-high school graduates, 39% high school or GED graduates, 37% some college work, 9% bachelor degrees, 6% some graduate work, 6% master degrees, 1% doctoral degrees; 78% white, 10% black, 5% hispanic, 7% listed as other than white, black, or hispanic; 86% males, 14% females; 17% officers, 66% enlisted, and 17% civilians.

### Survey Instrument

Data were collected using the Organizational Assessment Package (OAP), an attitudinal survey containing 7-point Likert Scales (Hendrix & Halverson, 1979). The OAP included measures of areas relating to the job, one's supervisor, the organizational climate, the perceived productivity of one's work group, and job satisfaction.

### Data Analysis

In a previous study (Hendrix & Halverson, 1979), 22 OAP factors were extracted. Three of these factors (General Organizational Climate, Job-Related Satisfaction, and Perceived Productivity) were selected as dependent variables or effectiveness criteria for this study. Each subject's factor score was computed for each of the three criteria. These scores served as inputs to a 1-Way Analysis of Variance (ANOVA) to test for significant differences associated with whether the supervisor actually writes the performance reports and a 2-Way ANOVA to test for significant differences associated with subject's sex and the amount of communication between workers. Those subjects who failed to respond to items associated with a given criterion were deleted from the analysis. The actual n associated with each analysis is provided in the results section. Table 1 provides the three OAP items used for analysis (i.e., supervisor actually writing the performance reports, sex, and communication between workers).

TABLE 1

## Background Information Items Analyzed by ANOVA

Response Group	Item Statement
	Does your supervisor actually write your performance report?
1	1. Yes
2	2. No
-----	
	Your sex is:
1	1. Male
2	2. Female
-----	
	Your job requires how much communication between workers?
1	1. Very little
2	2. Little
3	3. Moderate
4	4. Very Frequent
5	5. Almost Continuous

## RESULTS

### Analysis 1. Whether Supervisor Actually Writes Performance Reports.

General. The analysis of variance summary tables for Analysis 1 are provided in Table 2. Figure 1 graphically depicts the differences between standard scores for each criterion by response group.

---

General Organizational Climate (n=4099), Job-Related Satisfaction (n=3871), and Perceived Productivity (n=4197). For all three criteria, the analysis of variance indicated a significant ( $p < .001$ ) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between all pairs of means.

Discussion. The data indicate a consistent relationship between all three effectiveness criteria and whether the supervisor actually writes the performance reports. Specifically, it was found that those subjects whose supervisors write the performance reports scored significantly higher on all three criteria.

### Analysis 2. Sex by Communication Between Workers.

General. The analysis of variance summary tables for Analysis 2 are provided in Table 3. Figure 2 graphically depicts the differences between standard scores for each criterion by response group for sex and communication between workers.

---

TABLE 2

Analysis of Variance Summary Table for Whether Supervisor  
Actually Writes Performance Reports

---

General Organizational Climate

<u>Source</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	145.8785	148.42	.001
Within Groups	4097	.9829		
Total	4099			

Job-Related Satisfaction

<u>Source</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	156.4303	136.19	.001
Within Groups	3869	1.1486		
Total	3871			

Perceived Productivity

<u>Source</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	106.8759	90.25	.001
Within Groups	4195	1.1843		
Total	4197			

---

TABLE 3

Analysis of Variance Summary Table for Sex (S) by Communication (C)

---

<u>General Organizational Climate</u>				
<u>Source</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Sex (S)	1	1.8307	1.8439	.175
Communication (C)	3	15.9058	16.0209	.001
Sex x Communication (S x C)	3	.7644	.7700	.511
Within Cell	4074	.9928		

<u>Job-Related Satisfaction</u>				
<u>Source</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Sex (S)	1	22.0318	18.8427	.001
Communication (C)	3	5.0854	4.3493	.005
Sex x Communication (S x C)	3	1.9780	1.6917	.167
Within Cell	3845	1.1693		

<u>Perceived Productivity</u>				
<u>Source</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Sex (S)	1	4.4952	3.8776	.049
Communication (C)	3	29.1686	25.1609	.001
Sex x Communication (S x C)	3	1.0797	.9313	.425
Within Cell	4167	1.1593		

---

FIGURE 1  
SUPERVISOR ACTUALLY WRITES PERFORMANCE REPORTS

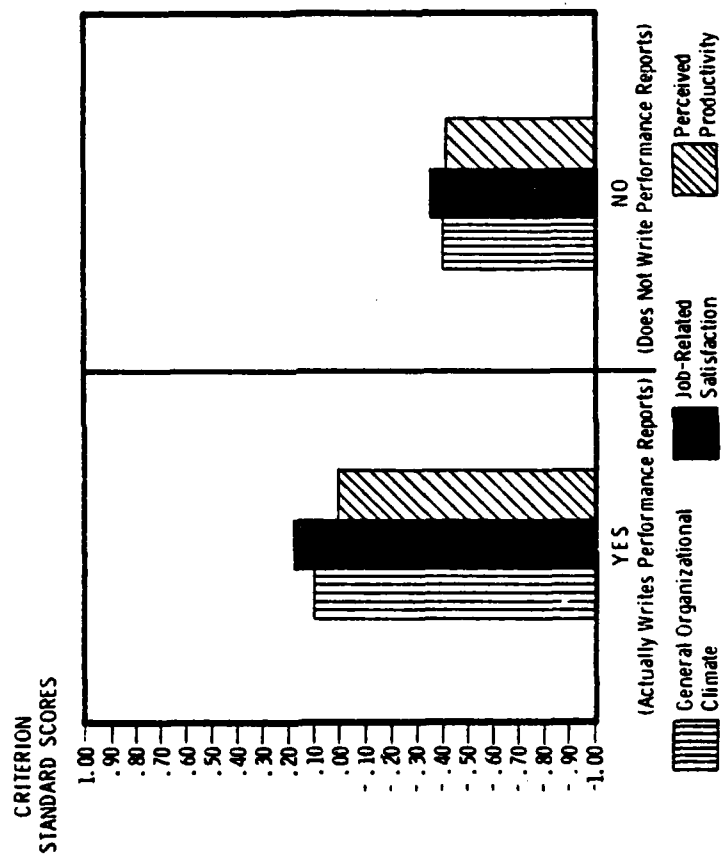
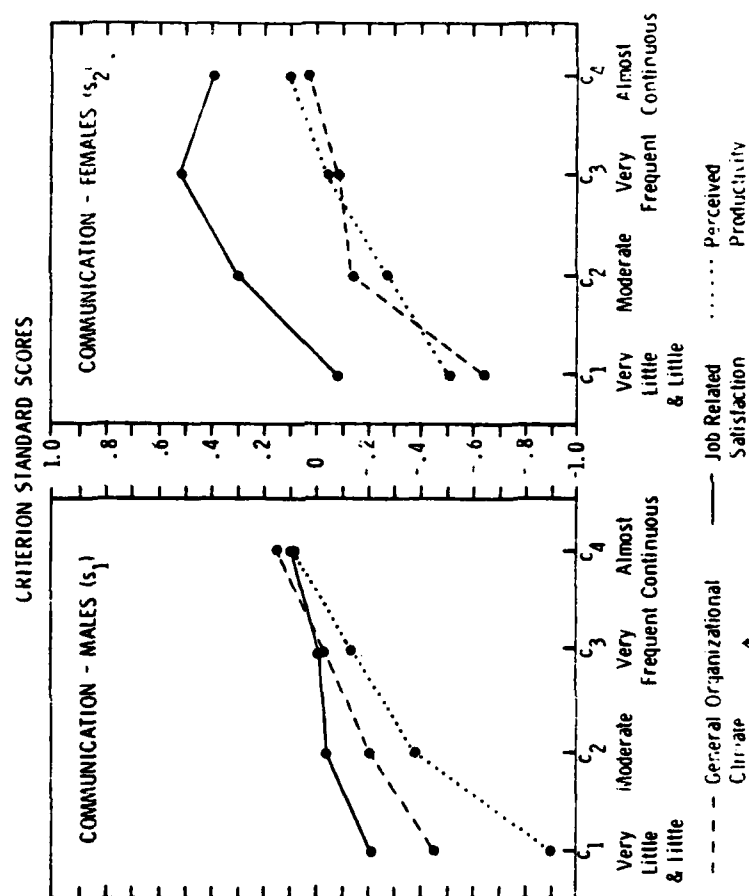


FIGURE 2  
COMMUNICATION BY SEX





General Organizational Climate (n=4081). The analysis of variance indicated that the main effect for sex (S) and the interaction effect (S x C) were not significant. The test for simple main effects indicated that communications (C) was significantly ( $p < .001$ ) different for males (response group  $s_1$ ). The Newman-Keuls Sequential Range Test indicated that all communications levels for males differed significantly from each other. Subjects who indicated "almost continuous" ( $c_4$ , response 5) scored the highest on this criterion, followed in descending order by  $c_3$ ,  $c_2$ , and  $c_1$  ("very frequent," "moderate," and the combined responses "little" and "very little" respectively).

Job-Related Satisfaction (n=3853). Main effects for sex (S) and communications were significant beyond the .001 and .005 levels, respectively. The interaction effect (S x C) was not significant. The test for simple main effects associated with the communications factors indicated that communications were significantly different for males ( $s_1$ ) and females ( $s_2$ ). The Newman-Keuls Sequential Range Test indicated that, for males ( $s_1$ ), the groups responding to the "almost continuous" category ( $c_4$ , response 5) had a response mean that was significantly higher than for all other male response groups. For females ( $s_2$ ), the Newman-Keuls Sequential Range Test indicated that the group responding to the "very little" and "little" categories ( $c_1$ , responses 1 and 2) differed significantly from those responding to the "almost continuous" category ( $c_4$ , response 5). Tests for simple main effects associated with the sex factor, and the Newman-Keuls Sequential Range Test indicated that sex was significantly different for three communication levels, "moderate" ( $c_2$ ), "very frequent" ( $c_3$ ), and "almost continuous" ( $c_4$ ), with the female responses being higher than males for levels  $c_2$ ,  $c_3$ , and  $c_4$ .

Perceived Productivity (n=4175). Main effects for sex (S) and communications (C) were significant beyond the .05 and .001 level respectively. Tests for simple main effects associated with the communications factor indicated that communications was significantly different for males ( $s_1$ ), and females ( $s_2$ ). The Newman-Keuls Sequential Range Test indicated that all communications levels for males differed significantly from each other. Subjects who indicated "almost continuous" ( $c_4$ , response 5) scored the highest on this criterion, followed in descending order by  $c_3$ ,  $c_2$ , and  $c_1$  ("very frequent," "moderate," and the combined responses "little" and "very little" respectively). For females ( $s_2$ ), the Newman-Keuls Sequential Range Test indicated that those responding "almost continuous" ( $c_4$ , response 5) had a significantly higher mean response when compared to those responding "moderate" ( $c_2$ , response 3), and "little" and "very little" ( $c_1$ , responses 2 and 1).

Discussion. The data indicate a general pattern for the three criteria. Generally, as the amount of communications between workers increased, the reported criterion responses also increased. For "General Organizational Climate", the significant differences were limited to males who scored higher as the amount of communications increased from level  $c_1$  ("very little" and "little") to  $c_4$  ("almost continuous"). For the "Job-Related Satisfaction" criterion, males scored higher on level  $c_4$  ("almost continuous") than for any other communication level. For females, communication levels  $c_4$  and  $c_3$  ("almost continuous" and "very frequent" respectively) only scored significantly higher than communication level  $c_1$  ("very little" and "little"). When "Perceived Productivity" was used as the criterion, the mean criterion score for males increased as the amount of communications between

workers increased. For females, communication level  $c_4$  ("almost continuous") was significantly higher than levels  $c_2$  ("moderate") and  $c_1$  ("very little" and "little"). Although the main effect for sex was significant, no simple main effects for sex at different levels of communication were found.

#### SUMMARY

This paper assessed the relationship between three factors (supervisor actually writing performance reports, sex, and communication between workers) to determine if they were related to three criteria of organizational effectiveness. The findings indicate that there are consistent patterns of relationships between the three factors and the three effectiveness criteria. The positive relationship between effectiveness and whether the supervisor actually writes the performance reports suggests that effectiveness is improved by virtue of having employees' performance reports written by their respective supervisors. Additionally, the data from the 2-way ANOVA of sex by communication revealed a consistent, positive relationship between the extent of communication among workers (for both male and female groups) and all three effectiveness criteria. This suggests that effectiveness is improved by greater communication among workers.

A basic premise of this study was that in order to enhance effectiveness, in itself a multi-dimensional construct, we need to identify its relationships with a variety of factors. This study suggests three (of many) which appear to be significantly related to the criteria of general organizational climate, job-related satisfaction, and perceived productivity.

#### REFERENCES

Goodman, P. S. and J. M. Pennings, (Eds.). New Perspectives on Organizational Effectiveness, San Francisco CA: Jossey-Bass, 1979.

Hendrix, W. H. and V. B. Halverson. Organizational Survey Assessment Package for Air Force Organizations. AFHRL-TR-78-93. Brooks AFB, TX: Occupation and Manpower Research Division, Air Force Human Resources Laboratory, February 1979.

Steers, R. M. Organizational Effectiveness: A Behavioral View. Santa Monica CA: Goodyear Publishing Company, Inc., 1977.

